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(320) 231-7185

To: Bob Warr (via Leo)

From: Byron Ensworth

Date: 8/27/96

RE: SHOWERING BOWLS

I showered bowls to remove  
purge as requested. Product  
tastes very good after smoke step.

Current smoke cycle:

10 minutes 160/160  
40 minutes 180/127  
then 1st smoke step

WE TESTED:

5 minute shower  
20 minutes 180/127  
then 1st smoke step

SMED 25 minutes, and no visual  
difference in product appearance.

will test full oven and determine  
yield benefit. Please advise of any  
questions.

Byron 8/27/96

Confidential  
Restricted Access  
U-07431

PTO-004008

Mesquite Bowl,

8/6/96

RACH #	test nrch	neted.		dracked	
(2518)		1639	91.58%	1501	(138)
2843	---	1600	91.52%	1465	(135)
6170	---	1678	91.54%	1536	(142)
2825	---	1630	91.90%	1498	(132)

↑  
used  
out of  
oven.

21.8  
65  
283

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Restricted Access  
U-07432

PTO-004009

- place water rack in oven
- at 160/160 5 minutes
- skip 160/160
- 180/275 for 20 minutes



next cycle

2 racks

- Shown 5 min  
180/275 20 min  
condition  
with  
cycle

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Restricted Access  
U-07433

PTO-004010

UNITHERM Food Systems, Inc.									
Cooking Trial Data					RAPID FLOW OVEN				
Cooking Trial Data					Supplied By:				
Test #	Belt Speed	Cook Time	Product:		Start Weight	Cooked Weight	Yield	Internal Temp. F.	Remark
			Zone 1	Zone 2					
#1	Slow		298		4.51 4.50 1.8 Bag	3.09	88.5%	140-155	Not Fully Cooked Color similar to Finished product from Doctor
#2	Slow		298		6.22 3.18 5.83	4.21	72.09%	150-170F	Savory
#3									Barbecue
#4									
#5									
#6									

# NOTES

#1 RPM 640 F: 220-240 H: 3 I: 1.8A M: 35% Steam: Off

Dwell Time: 10 min 20 sec

#2 Same as #1

Dwell Time: 10 min 20 sec Too much color development

#3

U-03914

#4

#5

#6

# UNITHERM Food Systems, Inc.

Date :

## Cooking Trial Data

### Product:

### Supplied By:

Test #	Belt Speed	Cook Time	Temperatures C.		Start Weight	Cooked Weight	Yield	Internal Temp. F.	Remarks
			Zone 1	Zone 2					
#1	23.05 #4 11 min 35 sec				8.64	8.37 8.33			46°F Internal 108°F Dipred 2 Times 68°F at post
#2					8.61	8.37 8.36			
#3					8.61	8.40 8.38			
#4					8.71	8.50 8.49			113°F 2 Buns supports 120°F Redipool 66°F Ext
#5					8.62	8.38 8.35			
#6									
NOTES					8.63	8.42			
#1						8.40			
#2					8.64	8.44			
#3						8.42			
#4					8.62	8.42			
#5						8.40			
#6									

U-03915

# UNITHERM Food Systems, Inc.

Date:

## Cooking Trial Data

### Product:

### Supplied By:

T t #	Belt Speed	Cook Time	Temperatures C.		Start Weight	Cooked Weight	Yield	Internal Temp. F.	Remarks
			Zone 1	Zone 2					
#1					5.82	5.73	98.5	56.9 F 5.00 40.0 F 2.00	16.0 F 52.0 F
#2					5.68	5.62	98.9		17.0 F
#3					5.42	5.37	99.08		2.7.1
#4									
#5									
#6									

## NOTES

#1

#2

#3

U-03916

#4

#5

#6

# UNITHERM Food Systems, Inc.

Date:

## Cooking Trial Data

			Product: 55144		Supplied By:				
Test #	Belt Speed	Cook Time	Temperatures C.		Start Weight	Cooked Weight	Yield	Internal Temp. F.	Remarks
			Zone 1	Zone 2					
#1	45.03 3 min 05 sec				8.66	8.53	98.5	101°	light labor
#2	23.01 #2	11 min			8.66	8.41	97.11	135°	Dark Reddish Color Int. 148°
#3		11 min	208°F		8.63	8.45	97.9		Starting Internal 46°F
#4	347°	23.05			8.65	8.70	97.11		49°F Int 101°F Ext
#5	350°F				8.62	8.34	97.10		Start Int 46°F Surface 59°F
#6	350°				8.61	8.35	97.10		End Surf 110°F 49°F Int
									49°F Int 50°F
									106°F surf 46°F Int

## NOTES

#1

#2

#3

#4

#5

#6

#3 (47) RPM I: 1.7A M: 38° 23.05 H2

U-03917



Did you have these results for Andersen foods.

U-8217

CONFIDENTIAL-ATTORNEY ONLY

PTO-004015

UNITHERM Food Systems, Inc.										Date: 9/2/96
Cooking Trial Data										
Test #	Belt Speed	Cook Time	Product: 76 Oven Roast		Start Weight	Cooked Weight	Yield	Internal Temp. F.	Supplied By: Hudson	Remark
			Temperatures C.							
			Zone 1	Zone 2						
#1	1560 Hz	250			7.81	7.34 <sup>73</sup>	93.98			42 EXT 44 INT 760F surface chilled
#2					8.14	7.67 <sup>763</sup>	94.22			167 EXT 44 INT
#3					8.32	7.91 <sup>788</sup>	95.07			
#4					8.97	7.56 <sup>751</sup>	94.86			
#5					8.36	7.87 <sup>781</sup>	94.14			
#6					8.47	8.06 <sup>799</sup>	95.16			
NOTES										
#1	8.20 7.80 95.12									
#2	8.12 7.71 95.12									
#3										
#4										
#5										
#6										

U-8218

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PTO-004016

UNITHERM Food Systems, Inc.										Date:	
Cooking Trial Data											
Test #	Belt Speed	Cook Time	Product: 50076 Molluscs Lit		Start Weight	Cooked Weight	Yield	Supplied By:	Internal Temp. F.	Remark	
			Zone 1	Zone 2							
#1		21.57#2	350°		8.3	7.58	95.59	Chilled	42°F Int		
#2					8.16	7.89	96.69		45°F Int		
#3					8.19	7.93	96.83		116°F Surface		
#4					8.17	7.94	97.18		50°F Int		
#5					8.03	7.68	95.64				
#6					8.42	8.14	96.67				
NOTES											
#1	7.94 7.64 96.22										
#2	8.13 7.88 96.92										
#3											
#4											
#5											
#6											

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U-8219

PTO-004017

UNITHERM Food Systems, Inc.										Date:	
Cooking Trial Data											
Test #	Belt Speed	Cook Time	Product:		Start Weight	Cooked Weight	Yield	Internal Temp. F.	Supplied By:	Remark	
			Zone 1	Zone 2							
#1			350°C		9.42	9.08	96.3			Super Poly	
#2			350°C		9.31	8.97	96.3			063 Smoke	
#3			350°C		9.27	8.95	96.5			42°F Int 52°F Ext	
#4					9.02	8.77	97.2			108°F Surface 44°F Int	
#5					9.50	9.21	96.9				
#6					9.54	9.25	97.0			63°F Ext of pack	
NOTES											
#1	9.32 9.14 98.1										
#2	9.41 9.08 95.6										
#3	9.47 9.20 97.1										
#4	9.24 9.08 97.8										
#5	9.34 9.20 97.0										
#6	9.31 9.03 97.0										
	8.99 8.75 97.10										
	9.33 9.10 97.50										

UNITHERM Food Systems, Inc.										Date: 9/13/96
Cooking Trial Data										SMOKE WHITE 51002
Product:										Supplied By:
Test #	Belt Speed	Cook Time	Temperatures C.		Start Weight	Cooked Weight	Yield	Internal Temp. F.	Remarks	
			Zone 1	Zone 2						
#1		11 min	350°		5.91	5.83	98.65		468F Surface & Internal 498F INT 164°F EXT	
#2					6.27	6.19	98.72		Dark Fire / only 205°C	
					5.97	5.91	98.99			
					5.71	5.66	98.95			
					5.73	5.65	98.60			
					6.03	5.98	99.17			
NOTES										
#1	23.02 Hz	1.8A			5.72	5.67	99.13			
#2					5.50	5.55	99.11			
#3					5.49	5.38	98.89			
#4					5.50	5.45	99.09			
#5					5.59	5.54	99.11			
#6					5.45	5.41	99.27			

CONFIDENTIAL-ATTORNEY ONLY U-8221

PTO-004019

# UNITHERM Food Systems, Inc.

Date:

## Cooking Trial Data

Test #	Belt Speed	Cook Time	Product:		Start Weight	Cooked Weight	Yield	Supplied By:	Remarks
			Temperatures C.						
			Zone 1	Zone 2					
#1			350°c 23.02 hr		9.92	9.08	96.3		Super Poly
#2			350°c 15.18 hr		9.31	8.97	96.3		0.63 Smoke
#3			350°c		9.27	8.95	96.5		42°F Int 52°F Ext
#4					9.02	8.77	97.2		108° Surface 44°F Int
#5					9.50	9.31	96.9		
#6					9.54	9.25	97.0		63° Ext or pick

## NOTES

#1 9.32 9.14<sup>9M</sup> 98.1

#2 9.41 9.0<sup>8.59</sup> 95.6

#3 9.47 9.20<sup>9.17</sup> 97.1

#4 9.24 9.0<sup>9.08</sup> 97.8

#5 9.34 9.05<sup>9.0</sup> 97.0

#6 9.31 9.03<sup>9.18</sup> 97.0

8.99 8.73<sup>8.70</sup> 97.10

9.08 9.08<sup>9.08</sup> 97.10

UNITHERM FOOD SYSTEMS INCORPORATED  
1108 WEST HARTFORD  
PONCA CITY, OKLAHOMA 74801  
TELEPHONE: 405-762-0197  
FAX: 405-762-0199

**FAXED**  
09-26-96



A WORLD OF STAINLESS STEEL PRODUCTS

September 26, 1996

Dick Taylor  
PLANTATION FOODS  
3130 Gholsen Road  
Waco, TX 76702-0788

Via Fax # 817-799-5229

RE: Quote # 354DH

Dear Dick:

It was a pleasure to meet with you yesterday. The following is a list of equipment required for the browning line.

Browning Line

2-Zone RapidFlow (5,000 lbs per hour)	\$ 250,000
Liquid Smoke Dip	\$ 25,000
Bag Stripper / Casing Removal (12 units per minute)	\$ 20,000
Purge Removal and Air Knife	\$ 15,800
Rotary Table for discharge into single file	\$ 14,000

These are the primary pieces for this line.

Fry Line

Bag Stripper	\$ 25,000
Purge Removal and Air Knife (2 piece feed)	\$ 15,800

Delivery

10 - 12 weeks	
Budget cost	\$ 1,600

Ancillary Conveyors

Budget Price	\$ 28,000
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A DIVISION OF UNITHERM FOOD SYSTEMS INCORPORATED

U-04846

All pricing is F.O.B. Ponca City, Oklahoma.

As discussed, ownership of the process would remain with UNTHERM until PLANTATION FOODS accepts the handover documents.

Upon ordering the equipment specified in the Browning Line and Fry Line, we would commit Chris Foster to site for 2 - 4 days to agree the product flow. In short, he would lay out the line and look for your endorsement. It would be clear from this layout if any ancillary conveyors would be required.

Full engineering drawings will be supplied for approval.

The line would be run and tested at Ponca City prior to delivery. We would expect PLANTATION FOODS to provide product for test purposes, and to visit site prior to shipping. Commissioning trials conducted here prior to delivery will reduce commissioning costs.

#### About the Equipment

##### **Casing Removal**

Turkey breasts are manually removed from the trolley and placed on the stripping conveyor. Filtered, compressed air is injected to separate the casing from the product. The breast is then conveyed through a slitter, where a series of parallel opposing knives slit the casing. The knives are depth-controlled to prevent scoring of the meat, and individually follow the contour of the breast to provide uniform slitting of the casing. The product is then conveyed to a casing removal station where the separated and slit casing is manually removed from the breast.

##### **Auto Purge Removal and Drying Chamber**

The breasts, with casings removed, are conveyed through a purge removal chamber that steams the product at a preset temperature and dwell time. Temperature and dwell times are adjustable. At the end of purge removal, the breasts are transferred through an air knife to remove excess moisture. The temperature is thermostatically controlled.

##### **Smoke / Liquid Applicator**

This would be designed to re-circulate the liquid in a partial dip tank. There would be an automatic self-leveling infeed from a header tank to assure a minimum of by-product. The process would filter out particulate.

U-04847



**RapidFlow / Process Parameters**

Product: Turkey / Chicken Crowns  
Initial Temperature: 40°C  
Cook / Brown Temperature: 300°C  
Residence Time: 7½ to 10 minutes  
Steam Injection: 2 Bar (not required for browning)

**Anticipated Throughputs based on following data:**

Crown Size / Foot Print: 8" x 12"  
Initial Weight: 10 lb.  
Finished Weight: 98 - 99 percent  
Throughput (Raw): 4800 lb. (10 minute dwell time)

**UNITHERM RAPIDFLOW II CONTINUOUS CONVECTION OVEN REF**

Belt Height: 40"  
Belt Width: 40"  
Belt Type: Flat flex wire belt  
Overall Length: 20'  
Cooking Length: 17'  
Drive Motors: 1 off, SEW geared motor. IP 55 (1.3kW)  
Belt Speed: 2 minute minimum; 4 hour maximum  
Circulation Fans: 6 off, stainless steel impeller (6 x 0.75 kW)  
Balanced by UNITHERM to provide even heat across entire belt width.  
Steam Injection System: Into cooking chamber. Nominally 80 kgs per hour maximum at 2 bar dry saturated. (Independently controllable.)  
Extraction Fan: 2 off, Bifurcated 2000 cfm variable (0.75kW).  
Stainless steel construction.

U-04848

**Belt Washer (Continuous):** High pressure (25 bar) pump. Adjustable weir plate within washer to regulate water usage / effluent discharge. Pump close-coupled to 15 kW drive motor.

**Heating System:** Comprised of 48 x 2 kW finned incolloy elements per zone. Elements designed to maximize efficient heat transfer (192 kW total heating load).

Elements controlled via electronic thyristor drive to maximize energy efficiency. To maximize start-up time, full energy usage allows the oven to reach maximum temperature (350°C) within 15 minutes from cold.

PID temperature controllers within each zone allow accurate set point control of +/- 1°C.

**Fire Protection Systems:** Operated by a solid-state, approved fire detector. Twin systems, steam at nominally 6 bar to flood the lower chamber and cooking area. Mains water into the oven top canopy. Pressure switches ensure pressure available to allow machine to operate.

**General Construction:** All AISI 304 stainless steel. Main framework constructed from 40 x 40 RHS. Inner chamber allowed to "Free Float" for expansion purposes. Height adjustable, self-leveling feet fitted. Outer canopies hinged to allow cleaning. During hygiene, all belt support rods are easily removed and refitted.

Fat collection tray in lower cooker chamber with 3"-diameter outfeed pipe to drain / collection system. Baffle plates on circulation fans are removable for hygiene. All pipework has de-mountable fitting to allow hygiene.

**Control Panel:** Stainless steel IP 65, clear macrolon cover over door furniture and controllers. Visual display of temperature in each zone. Visual display of belt speed (frequency). General control gear telemecanique.

**All Up Power Requirements:**

Heating System:	192 kW
Circulation Fans:	4.5 kW
Extraction Fans:	3 kW

U-04849

Belt Washer:	15 kW
Controls, etc.	2 kW
Drive Motors:	2 kW

Total:	<u>218.5 kW</u>
--------	-----------------

### Running Costs

During start-up (15 minutes), 100 percent power is required during normal operation; the thyristor drive modulates the load to nominally 30 percent of the P.L.C.; this equates to 70 kW. Given an industrial cost per kWh of 77 cents, this gives a running cost of nominally \$4.90 per hour.

Costs of maintenance are minimal. A weekly check of all components will take one hour, due to the "Maintenance Friendly" design of the machine.

### Commercial Notes

Installation includes the following:

- Mechanical erection and leveling
- Electrical interconnection using stainless steel and flexible conduit
- Functional testing of all systems
- Fire suppression system testing

### Exclusions

- Civil engineering work
- Ducting from top of extract fans through roof space
- Service connections (mains, incomer, steam, water, drains)

### Commissioning

Commissioning will commence upon completion of installation.  
Commissioning is charged at \$50 per hour for all hours worked, including traveling.  
Out-of-pocket expenses and hotels will be charged at cost, or if preferred, settled directly by the client.  
Signed timesheets to be submitted for approval; these form the basis of invoices.

### Documentation

Machine will be supplied with one full instruction manual including electrical drawings.

U-04850

Dick Taylor

Pag 6

September 26, 1996

Spares

A comprehensive spares listing with recommended stock holding will be supplied after order placement.

Payment Terms on All Items

30% Deposit with purchase order  
60% Prior to shipment  
10% Due within 30 days of delivery

Terms and Conditions of Sale

This contract is subject to UNITHERM standard terms and conditions of sale printed on the reverse of this quotation's cover sheet.

I trust this quotation will meet with your approval; I look forward to speaking with you soon.

Regards,

*David Howard*

David Howard  
President

U-04851

U-04852

# SERVICE REQUIREMENTS

## ELECTRICAL:-

480V 3 PHASE, NEUTRAL & EARTH CABLES TO BE CAPABLE OF CARRYING 450 AMPS PER PHASE MINIMUM.

## WATER FOR FIRE SYSTEM:-

3/4" N.P.T MAX FLOW AT 3 BAR MINIMUM. (4.5 P.S.I.)

## WATER FOR BELL WASH:-

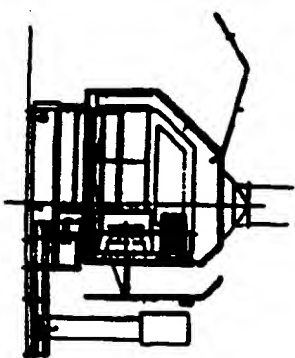
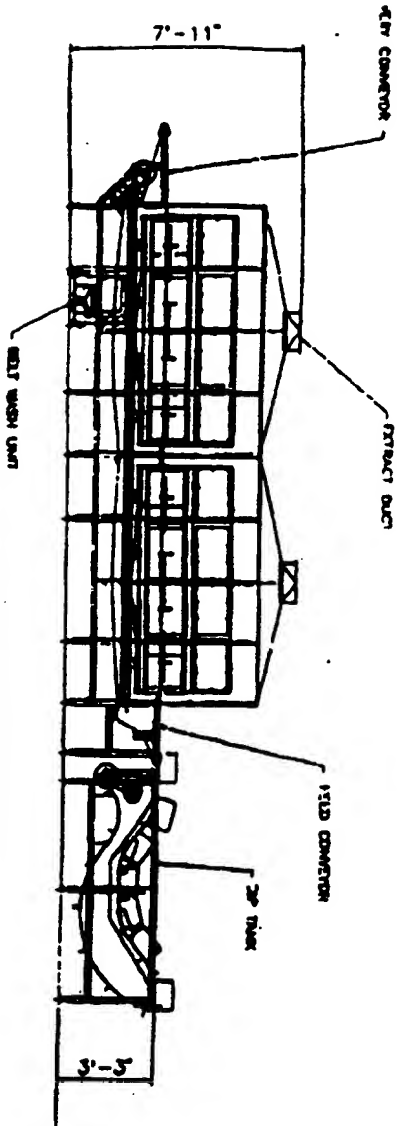
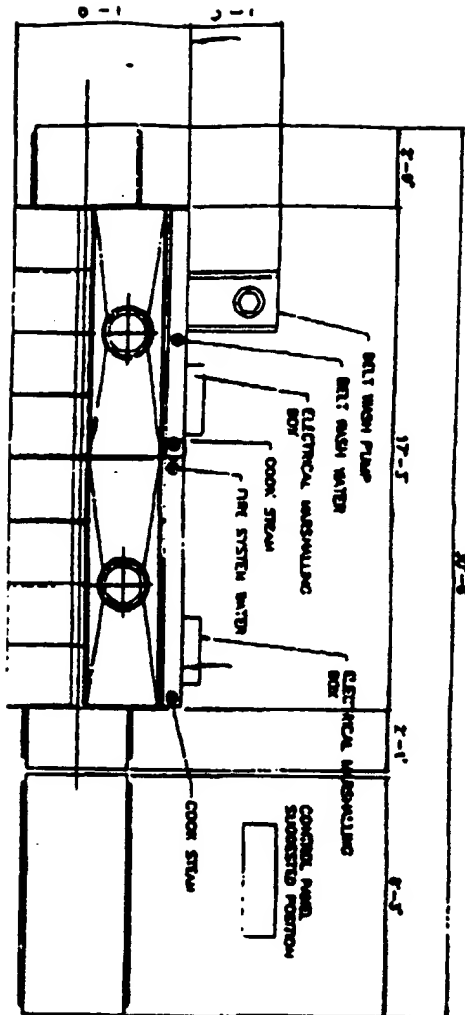
1/2" N.P.T. AT 3 BAR (4.5 P.S.I.) 80 GALS TO FILL

## STEAM FOR COOKING:-

110 BPS / HOUR AT 3 BAR (4.5 P.S.I.) 2 POSITIONS

## DUCTING FROM EXTRACT FANS -

15.75" V/D FLANGE CONNECTION O/D 19.75" I/D 15.75" 8 HOLES 1/2" DIA. ON A 1/4" P.C.D



Unit: m

Doc 09 00 09:04

580-762-0198

UNITHERM FOOD SYSTEMS INCORPORATED  
1108 WEST HARTFORD  
PONCA CITY, OKLAHOMA 74601  
TELEPHONE: 405-762-0197  
FAX: 405-762-0199



A WORLD OF STAINLESS STEEL PRODUCTS

October 09, 1996

Mr. Jeff Dierenfeld  
JENNIE-O FOODS  
1126 West Benson Ave.  
Willmar, MN 56201

Dear Jeff:

We ran the Liquid Smoke test as follows:

Two pieces with 50 / 50 solution of Charcoal Select

One piece with 100 percent Charcoal Select

The oven temperature was 250°, dwell time of 20 minutes.

We noticed after the third test that there is a relationship between the tightness of the netting and the amount of marking. We also noticed that if the netting is too tight it tears the skin when the netting is removed.

I do believe that we could match your product with adequate testing

I would like to run a test at 10 minutes at 320° with a 50 / 50 solution. I believe this would yield a darker product than the tests run so far

I hope you agree that the process is worth your visiting and conducting testing for yourselves.

Regards,

David Howard  
President

U-02281

PTO-004028

UNITHERM FOOD SYSTEMS INCORPORATED  
1106 WEST HARTFORD  
PONCA CITY, OKLAHOMA 74601  
TELEPHONE: 405-762-0197  
FAX: 405-762-0199



A WORLD OF STAINLESS STEEL PRODUCTS

November 05, 1996

Tim McConnell  
FOSTER FARMS  
520 "C" St.  
Turlock, CA 95380

*Via Fax # 209-394-6463*

Dear Tim:

It is important to read all of the notes when looking at the product. You will notice subtle changes in the process.

### SMOKED PRODUCTS

#### Product No. 1

This was dipped in liquid smoke for 60 sec.  
Solution was Charcoal Select, 70 Smoke / 30 Water  
Oven Temp.: 265° C.  
Dwell Time: 10 minutes  
Cook Yield: 98½ percent

#### No. 2

This was dipped in liquid smoke for 60 sec.  
Solution was Charcoal Select, 50 Smoke / 50 Water  
Oven Temp.: 265° C.  
Dwell Time: 10 minutes  
Cook Yield: 98 percent

#### No. 3

The same as No. 2

FF 00363

PTO-004029

No. 5

This was dipped in 30 percent Smoke / 70 percent Water  
Oven Temp.: 265° C.  
Dwell Time: 10 minutes  
Cook Yield: 98½ percent

No. 10

This product was dipped for 30 seconds in a 30 percent Smoke concentration.  
Oven Temp.: 280° C.  
Dwell Time: 10 minutes  
Cook Yield: 98½ percent

Fans were reversed to drive heat through the belt.

ROASTED PRODUCTS

No. 11

The dwell time for this product was increased to 20 minutes and the fans reversed to drive the energy through the belt. Yield was 93 percent.

The variables are time, temperature, and smoke concentration. The direction of the fans can deliver energy locally across the crown and through the belt. By reversing the fans on a one-zone oven, you direct more energy to the inside of the product.

I noticed that the peripheral edge of the product charred. This may be desirable or you may seek to eliminate it. This can be achieved by introducing super-heated vapor from steam. On this trial we did not use this process; however, during Gary's site visit, I will demonstrate this.

Please ring if you have any questions.

Regards,

A handwritten signature in black ink, appearing to be 'D. Howard', enclosed within a large, loopy oval stroke.

David Howard  
President

FF 00364

DH456TM

PTO-004030